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Identification and quantification of aroma-active components that contribute to the distinct malty flavor of buckwheat honey.

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Characteristic aroma components of buckwheat honey were studied by combined sensory and instrumental techniques. Relative aroma intensity of individual volatile components was evaluated by aroma extract dilution analysis (AEDA) of solvent extracts and by gas chromatography-olfactometry (GCO) of decreasing headspace samples (GCO-H). Results indicated that 3-methylbutanal, 3-hydroxy-4,5-dimethyl-2(5H)-furanone (sotolon), and (E)-beta-damascenone were the most potent odorants in buckwheat honey, with 3-methylbutanal being primarily responsible for the distinct malty aroma. Other important aroma-active compounds included methylpropanal, 2,3-butanedione, phenylacetaldehyde, 3-methylbutyric acid, maltol, vanillin, methional, coumarin, and p-cresol.

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